تکلیف ۲۶ — گروه دهم A (ریاضی) ب — [illegible]

$x^2 - ax + b$ $\quad \begin{array}{c} 1 \quad 3 \\ \hline + \; 0 \; - \; 0 \; + \end{array}$

$9-3a+b=0 \qquad -3a+b=-9$ ①

$1-a+b=0 \qquad (-a+b=-1)\times -3 \rightarrow 3a-3b=3$

$-2b=-6 \qquad b=3 \qquad a=4 \qquad a+b=7$

$x-3n=x+1 \qquad n=-\frac{1}{3}$

$(k-2)x+(m-1)=0 \longrightarrow x=4$ ②

$4k-8+m-1=0 \qquad m=9-4k$

$\frac{m}{n}+k=\frac{9-4k}{-\frac{1}{3}}+k=-3(9-4k)+k=-27+12k+k=13k-27$

$k-2>0 \longrightarrow k>2 \qquad k=3 \longrightarrow 39-27=12$

$-\frac{1}{4}x^2+2x+9>\frac{7}{4} \qquad -x^2+4x+5>0 \qquad x=\frac{4\pm 6}{2}=-1, 5$

$a=-1, b=5 \qquad b-a=5-(-1)=6$ ③

$f(x)=x^3-3x^2-x+3$

$x^2(x-3)-(x-3)=(x-3)(x^2-1)$

$3, 1, -1 \longleftarrow (x-3)(x-1)(x+1) \qquad \begin{array}{c} -1 \quad 1 \quad 3 \\ \hline - \; 0 \; + \; 0 \; - \; 0 \; + \end{array}$ ④

$(a,b)=(1,3) \longrightarrow \frac{1+3}{2}=2 \qquad f(2)=8-12-2+3=-3$

$a-1<0 \longrightarrow a<1$

$\Delta<0 \quad (a-1)(a-5)<0 \qquad \begin{array}{c} 1 \quad 5 \\ \hline + \; 0 \; - \; 0 \; + \end{array} \longrightarrow 1<a<5 \longrightarrow a<1 \cap 1<a<5=\varnothing$ ⑤

$\frac{m(m^2+1)}{m-2}>0 \qquad m-2\neq 0,\ m\neq 2 \qquad m^3+m=0$

$m(m^2+1)=0$

$m=0 \quad m^2=-1$ غ ق ق $\qquad \begin{array}{c} 0 \quad 2 \\ \hline - \; 0 \; - \; \| \; + \end{array} \qquad (-\infty,0]\cup(2,+\infty)$ ⑥

$\frac{(x^2-x-6)(x-1)^2}{\underbrace{(x^2+x+1)}_{+}(2-x)^3}<0 \qquad x^2-x-6=0,\ (x+2)(x-3)=0 \qquad \begin{array}{c} -2 \quad 1 \quad 2 \quad 3 \\ \hline - \; 0 \; + \; 0 \; + \; \| \; - \; 0 \; + \end{array} \qquad (-\infty,-2)\cup(2,3]$ ⑦

$\frac{(3x^2-2x)-2(x^2+4)}{x^2+4}<0 \qquad \frac{3x^2-2x-2x^2-8}{x^2+4}<0 \qquad \frac{x^2-2x-8}{\underbrace{x^2+4}_{+}}<0$ ⑧

$x^2-2x-8<0$

$(x-4)(x+2)<0 \qquad \begin{array}{c} -2 \quad 4 \\ \hline + \; 0 \; - \; 0 \; + \end{array} \qquad (-2,4) \rightarrow b-a=4+2=6$

$3x^2-4x=x(3x-4) \qquad \begin{array}{c} 0 \quad \frac{4}{3} \\ \hline + \; 0 \; - \; 0 \; + \end{array} \qquad 0<x<\frac{4}{3}$ ⑨

$x\neq -1$

$\frac{x^2-10}{x}-3<0 \longrightarrow \frac{x^2-3x-10}{x}<0$

$\frac{(x-5)(x+2)}{x}<0$ ⑩

$\begin{array}{c} -2 \quad 0 \quad 5 \\ \hline - \; 0 \; + \; \| \; - \; 0 \; + \end{array} \qquad x\in(-\infty,2]\cup[0,5]$